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Response to First Office Action of Nov. 3, 2003

Remarks

Claims 1, 4-18 and 39-41 are in the case.

Claims 1-38 were originally in the case. Claims 2 and 3 are cancelled. Claims 39-41 are new. Claims 19-38 are withdrawn from consideration as a result of the restriction requirement.

The courtesies extended by Examiner Dean J. Kramer in granting a telephone interview on January 26, 2003 with attorney for applicant, Brian L. Belles, are noted with appreciation. During the interview, the rejections set forth in the November 3, 2003 Office Action based on Weinstein et al. (U.S. Patent 3,755,079), Weaver (U.S. Patent 3,800,973) and Lauga et al. (U.S. Patent 5,469,936) were discussed. Frenix (U.S. Patent 5,297,917) was not discussed. Regarding the rejections based on Weaver (U.S. Patent 3,800,973) and Lauga et al. (U.S. Patent 5,469,936), since these references do not disclose systems related to spent nuclear fuel transfer and/or storage, it was agreed that amending claim 1 to recite "a cask for receiving spent nuclear fuel" would overcome the rejections based on the Weaver and Lauga et al. Accordingly, claim 1 has been so amended. No new matter has been added. Support can be found on page, lines 15-30 and Figure 2.

Also discussed in the telephone interview were the rejections based on Weinstein et al. (U.S. Patent 3,755,079) and how Weinstein et al. differs from the present invention. Specifically discussed was how Weinstein et al. failed to disclose a system having a shell that is sized and shaped to form a tight clearance between the cask and the shell when the cask is positioned within the opening. Instead, the system of Weinstein et al. comprises a hole in the ground that opens into a chamber 6 that is large enough to hold multiple casks. Examiner Kramer suggested that if claim 1 is amended to clarify this distinction, the rejections of claim 1 based Weinstein et al. would be overcome. Although, the exact language of the amendment was not agreed upon, applicants believe the present amendment does clarify this distinction over Weinstein et al. and is clearly supported in the original application. Claim 1 has been amended to recite "a shell forming walls of the opening, the shell having a horizontal cross section that is slightly larger

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than the horizontal cross section of the cask." Support can be found in original claims 2 and 3 and Figures 2-4.

New claims 39 and 40 have been added. Claim 39 depends on claim 1 and recites "wherein when the cask is positioned in the opening, the horizontal cross section of the shell is substantially concentric with the horizontal cross section of the cask." No new matter is added. Support can be found in Figures 2 and 3. Claim 40 depends on claim 1 and recites "wherein when the cask is positioned in the opening, a tight clearance is formed between the shell and the cask." No new matter is added. Support can be found on page 7, lines 24-32.

Election/Restriction

Regarding paragraph 2 of the Office Action, claims 19-38 have been withdrawn from consideration as a result of the restriction requirement. A divisional patent application will be filed with these claims at a later time.

Claim Rejections – 35 U.S.C. § 102

In paragraph 4 of the Office Action, claims 1-3, 5, 6, 9-11, 13, 15 and 17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Weinstein et al. Claim 1 has been amended to recite "a shell forming walls of the opening, the shell having a horizontal cross section that is slightly larger than the horizontal cross section of the cask." As discussed above, Weinstein et al. does not disclose such a shell. In comparison, the system of Weinstein et al. is a hole in the ground that opens into an area comprising a primary entombment area 5 located directly beneath the hole and an auxiliary entombment area 6 adjoining primary entombment area 5. There is no shell surrounding the primary entombment area 5 because there must be access from the primary entombment area 5 to the auxiliary entombment area 6 so that a cask can be transferred to the auxiliary entombment area 6 for storage. See Weinstein et al., col. 4, lines 25-41. Therefore, Weinstein et al. neither discloses nor suggests a system for transferring spent nuclear fuel comprising a shell as is required by claim 1. It is believed that the rejection of claim 1 over Weinstein et al. is overcome and should be withdrawn.

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In paragraph 5 of the Office Action, claims 1-3, 9-10, 13, 15 and 17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Lauga et al. Claim 1 has been amended to recite "a cask for receiving the spent nuclear fuel" in the body of the claim. As discussed during the telephone interview, this amendment distinguishes claim 1 from Lauga et al. because Lauga et al. is directed to a system and method of retracting street furniture. There is no suggestion to use the device of Lauga et al. in combination with a cask adapted to receive spent nuclear fuel. It is believed that the rejection of claim 1 over Lauga et al. is overcome and should be withdrawn.

In paragraph 6 of the Office Action, claims 1-4, 9-11, 13, 15 and 17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Weaver. Claim 1 has been amended to recite "a cask for receiving the spent nuclear fuel" in the body of the claim. As discussed during the interview, this amendment distinguishes claim 1 from Weaver because Weaver is directed to an underground trash and garbage container. There is no suggestion to use the device of Weaver in combination with a cask adapted to receive spent nuclear fuel. It is believed that the rejection of claim 1 over Lauga et al. is overcome and should be withdrawn.

In paragraph 7 of the Office Action, claims 1-3, 9 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Frenix. Claim 1, as currently amended, requires "a shell forming walls of the opening, the shell having a horizontal cross section that is slightly larger than the horizontal cross section of the cask." This element is not shown in the system and method of Frenix. Frenix discloses a system and method of storing nuclear waste using a mine shaft 2. See Frenix, figure 1. According to Frenix, an elevator 4 is used to lower a carriage 9 holding means 9A for holding radioactive loads into the mine shaft 2. If one compares the mine shaft 2 of Frenix to the below grade opening recited in claim 1, it is apparent that there is no shell located therein. Moreover, the size of the mine shaft 2 is large enough to fit the entire elevator assembly 4 therein. Therefore, Frenix does not disclose "a shell forming walls of the opening, the shell having a horizontal cross section that is slightly larger than the horizontal cross section of the cask," as is required by currently amended claim 1. It is believed that the rejection of claim 1 over Frenix is overcome and should be withdrawn.

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Regarding the rejections of claims 2-6, 9-11, 13, 15 and 17, claims 2 and 3 are cancelled and are no longer at issue. Claims 4-6, 9-11, 13, 15 and 17 depend on claim 1, which is argued as being patentable over the rejections of record. Therefore, the rejections of claim claims 4-6, 9-11, 13, 15 and 17 should also be withdrawn.

Claim Rejections – 35 U.S.C. § 103

In paragraph 10 of the Office Action, claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Weinstein et al. Claim 7 depends on claim 1 and, for the reasons set forth above, is patentable over Weinstein et al. Therefore, the rejection of claim 7 is overcome and should be withdrawn.

Allowable Subject Matter

In paragraph 11 of the Office Action, claims 8, 12, 14, 16 and 18 are objected to as being dependant upon a rejected base claim, but are found to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Each of claims 8, 12, 14, 16 and 18 have been amended to be in independent form and include all of the limitations of the base claim and intervening claims. It is respectfully requested that the objection be withdrawn and these claims be allowed.

New Claims

Claim 39 is new. Claim 39 depends on claim 1 and further recites "wherein when the cask is positioned in the opening, the horizontal cross section of the shell is substantially concentric with the horizontal cross section of the cask." No new matter is added. Support can be found in Figures 2 and 3.

Claim 40 is new. Claim 40 depends on claim 1 and further recites "wherein when the cask is positioned in the opening, a tight clearance is formed between the shell and the cask." No new matter is added. Support can be found on page 7, lines 24-32.

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Claim 41 is new. Claim 41 is an independent claim. Claim 41 is identical to claim 12 (which was found patentable over the prior art of record) except that claim 41 is not limited to approximately 30 inches of the cask being above grade level when in the fully lowered position. Instead, claim 41 requires that "a portion of the cask is above grade level." It is believed that new claim 41 is patentable over the prior art of record for the same reasons as claim 12. No new matter is added. Support can be found in original claim 12, page 5, lines 15-20, and Figures 3-5.

It is believed that all grounds of rejection and objection have been traversed or obviated, and that all rejections and objections should be withdrawn.

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Respectfully submitted,

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